EXTender PBXgateway™ II

This robust voice network gateway extends feature-rich corporate voice systems to branch offices, call centers, home-based call center agents and teleworkers over traditional and next-generation networks, terminating all MCK client devices

EXTender PBXgateway™ II

The EXTender PBXgateway™ II is a high performance gateway that resides at the corporate voice system site and terminates all MCK EXTender™ clients including:

- MCK EXTender™ 7000 for Branch Offices[3]
- MCK EXTender™ 6000 for Branch Offices
- MCK EXTender™ 4000 for IP
- MCK EXTender™ 3000 for ISDN[1] (DEFINITY, Meridian and Norstar)
- MCK EXTender™ 1000+ for Analog[2] (DEFINITY only)

The EXTender PBXgateway II operates in serial Remote Voice Protocol (RVP)™ mode over traditional networks and in RVPoIP™ mode over next-generation networks.

MCK's Distributed Voice Solutions affordably and seamlessly extend the features and functionality of existing corporate voice systems to:

- Branch Offices
- Call Centers
- Home-Based Call Center Agents
- Teleworkers

across traditional and next-generation networks.

PRODUCT OVERVIEW

The EXTender PBXgateway II is MCK's most robust platform designed to support advanced business applications to be used by branch offices, call centers, home-based call center agents and teleworkers. This new-generation gateway includes all of the features and functionality of the EXTender PBXgateway and more.

The EXTender PBXgateway II is expandable in 24-user increments and terminates all of MCK's client products. With MCK's EXTender PBXgateway II, your remote workers can now enjoy all the features of the corporate voice system, enriched local calling and survivability. That's because the EXTender PBXgateway II works over circuit- or packet-based networks and includes an optional T1/PRI/FR network interface card.

REMOTE VOICE PROTOCOL (RVP) over Serial Connections

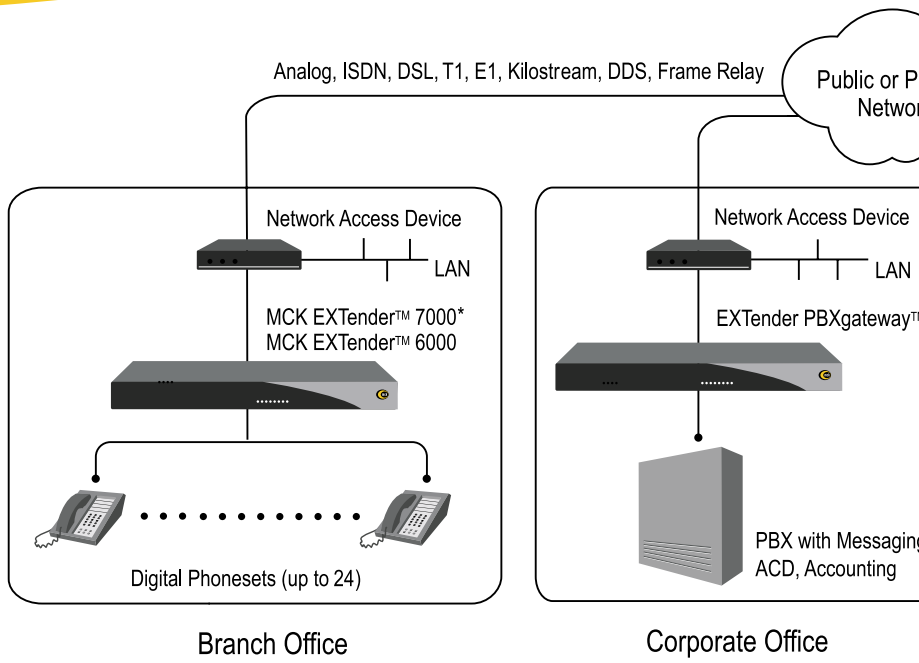
MCK's Remote Voice Protocol (RVP) converts digital voice and phone signaling into highly efficient data packets. Sophisticated software features include a G.165-compliant echo canceller enhanced with extremely robust double-talk performance, manufacturer-provided PBX protocols and a range of industry standard voice compression options.

The EXTender PBXgateway II can be configured to operate in either a managed IP network or a point-to-point synchronous WAN environment over traditional networks. In a traditional WAN environment, multiple MCK EXTender 7000 or 6000 for Branch Offices can be connected into a single EXTender PBXgateway II running serial RVP. The RVP relies on HDLC encapsulation over a serial port to transmit voice signals.

REMOTE VOICE PROTOCOL over IP Connections (RVPoIP)

To extend remote voice capability over a managed IP network, simply install an EXTender PBXgateway II at your corporate site and then choose a combination of IP-capable clients to meet your needs. Branch offices, teleworkers and remote call center agents can be connected using standard IP network termination devices such as IP routers or DSL modems. Software version 3.1, supports up to two MCK EXTender 7000 for Branch Offices to be connected into a single EXTender PBXgateway II running RVPoIP. MCK's RVPoIP relies on UDP/IP to transmit voice over IP networks.

EXTender PBXgateway™ II



* Direct termination of T1,PRI and frame relay lines.

MANAGEMENT FEATURES

MCK's business voice solutions have been designed for operational simplicity. All of the system's configuration, management, and administrative and diagnostic functions may be managed from the EXTender PBXgateway II using a direct serial connection, dial up modem, HTML, Telnet or an inband network connection from a remote client. This flexibility allows companies to maximize their system administration resources and lowers operating costs.

The EXTender PBXgateway II is equipped with dual DB-9 console ports (see picture below). These ports allow a system administrator to attach a modem to one and use the other for a local terminal connection. This versatility makes remote troubleshooting and maintenance a breeze.

FRONT VIEW

Two DB-9 console ports for easy system management

KEY BENEFITS

- Flexibility
  The optional network interface card allows for direct termination of T1, PRI and FR lines.

  Dual 10/100Base-T ports allow connection to high-speed Ethernet networks and separate segments for voice and management traffic.

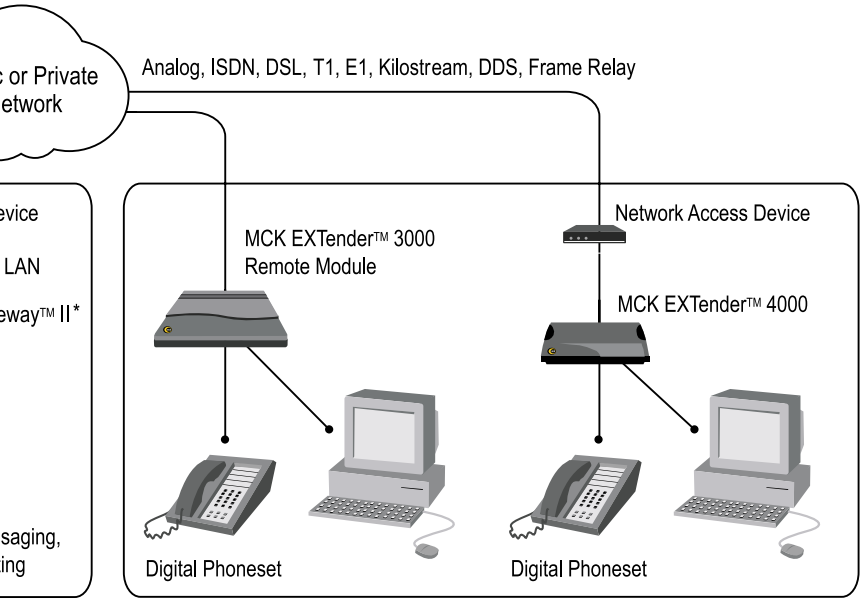
  Dual DB-9 console ports enable multiple management interface connections to operate simultaneously.

  Configure the EXTender PBXgateway II to operate in managed IP network (Layer 3) or in traditional circuit switched and frame relay (Layer 2) environments.
- Increased Productivity
  Remote employees are able to use the same full-featured digital sets and access corporate voice features, like voicemail, call accounting systems, unified messaging and ACD systems.
- Network Efficiency
  Leverage IP data network infrastructure for both voice and data traffic.
- Ease-of-Use
  Simple installation process.

  Easy–to-use configuration tools enable virtual management of remote users from a central location.
- Investment Protection
  MCK is committed to providing you with flexible product solutions for today's, and tomorrow's, needs.

KEY FEATURES

- Support for synchronous and asynchronous terminal adapters
- Encrypted username and password allocated by system administrator to each port
- Network down recovery
- Call suspend mode on ISDN Lines with Asynch terminal adapters
- Support for IP Precedence and DiffServ QoS mechanisms



Home Office

SYSTEM COMPATIBILITY

- Alcatel: 4400 and 4200
- Avaya™: DEFINITY® ECS (all G3 releases) and ECLIPS Media Servers and Gateways (digital phones only)
- Ericsson: MD110
- NEC: NEAX2000™, NEAX2400™, NEAX Express and Electra Elite
- Nortel: BCM, Meridian® and Norstar®
- Panasonic: DBS 576 and 576HD
- Toshiba: Strata DK

GENERAL SET-UP GUIDELINES

- The EXTender PBXgateway II can be ordered with or without a 2-port T1/PRI/FR network interface card.
- The EXTender PBXgateway II can be configured to run on IP transport or traditional circuit-switched and frame relay networks.
- When running RVPoIP, this gateway can be connected to the LAN via two 10/100Base-T ports simultaneously. Either port can be configured to carry voice and/or management, allowing both traffic types to be transmitted on separate LAN segments.
- When running serial RVP between an MCK EXTender 6000 and an EXTender PBXgateway II, the network access device is connected via one of the DB-25 WAN ports.
- Remote clients that support serial RVP are the MCK EXTender 7000 and 6000, MCK EXTender 3000[1], and MCK EXTender 1000+[2] in point-to-point mode.
- Remote clients that support RVPoIP are the MCK EXTender 7000 and 6000 and the MCK EXTender 4000.
- One EXTender PBXgateway II can support both serial RVP and RVPoIP remote clients simultaneously.
- Multiple MCK EXTender 7000 or 6000 for Branch Offices can be attached to one EXTender PBXgateway II.
- The EXTender PBXgateway II with the integrated network interface card terminates T1, PRI and FR networks directly, eliminating the need for external CSU/DSU devices.
- In RVPoIP applications, the network access device should be configured to provide Quality of Service* (QoS) in order to guarantee voice quality.
- IP or packet-based networks are terminated through a router.
- Minimal setup programming required, accomplished via dial up modem, Telnet, RS-232 console interface, inband RVP or HTML interface.

BACK VIEW

CONNECTORS INCLUDED IN BACKPLANE OF UNIT:

- Internal power supply
- Network interface card with two RJ-45 connectors
- One PCM port for network expansion cards (optional)
- Two RJ-45 10/100Base-T Ethernet for RVPoIP and Telnet/HTML system management
- Two DB-25 WAN ports for serial RVP connection. Redundant interfaces include V.35, RS-232 or RS-530
- One Amphenol connector for 50-pin RJ-21 cable for interface with digital telephone sets

EXTender PBXgateway™ II

ONLINE RESOURCES

- List of recommended network access devices available at www.mck.com in the Products & Solutions section

SOFTWARE SUPPORT

- TCP/IP protocol support for IP traffic and management access
- RVPoIP uses UDP/IP protocol for voice transmission
- Serial RVP uses HDLC encapsulation for voice transmission
- Management and Utilities – Telnet, inband RVP, RS-232 console interface, SNMP and HTML
- Wind River's VxWorks® operating system
- Software upgradeable via LAN FTP, RS-232 serial port to PC, or inband connection between the EXTender PBXgateway II and the MCK EXTender 7000 and 6000

VOICE PROTOCOLS

- Choice of voice compression standards:
  - G.729A (8 kbps)
  - G.726 (24 or 32 kbps ADPCM)
  - G.711 (64 kbps PCM)
- G.165 echo canceller software, with MCK proprietary double-talk detection enhancement
- MCK Remote Voice Protocol (RVP)
- MCK Remote Voice Protocol over IP (RVPoIP)
- IP voice packets are tagged for network traffic prioritization using IP Precedence or DiffServ

HARDWARE

- Form Factor: Low profile, 1U rack mountable unit

Other Components:

- Motorola MPC860T processor
- 16 MB Flash Memory, 16 MB SDRAM
- DSP Analog Devices 2185 (52 MIPS)

QUICK REFERENCE CHART

EXTender PBXgateway™ II	EXTender PBXgateway™
Available with 2-port integrated network card	Terminates network connections using external devices
Supports all MCK EXTenders	Supports the MCK EXTender™ 6000 and the MCK EXTender™ 4000
Equipped with two DB-9 console ports	Equipped with one DB-9 console port
Outfitted with two 10/100 Base-T LAN ports	Outfitted with one 10Base-T LAN port

POWER SUPPLY

- Internal
- Universal auto ranging
- Line voltage: 100 – 240 V
- Frequency: 47 – 63 Hz
- Maximum power consumption: 75 Watts

DIMENSIONS

- Size: 17" x 11" x 1¾" (432mm x 280mm x 44mm)
- Weight: 8.3 lbs (3.8 kg)

OPERATING ENVIRONMENT

- Temperature: 32° – 130° F (0° – 55° C)
- Relative humidity: 5 to 95% (non-condensing)

REGULATORY APPROVALS

- FCC Part 15 Class A and FCC Part 68, CE Mark, Industry Canada CS-03, NRTL/CSA, VCCI Class 1 and CISPR 22 Class A

WARRANTY

- One-year limited warranty for parts and labor

[1]Supported for DEFINITY by the EXTender PBXgateway II running software release 2.1 or later. Supported for Meridian by the EXTender PBXgateway II running software release 2.21 or later. Supported for Norstar by the EXTender PBXgateway II running software release 3.0 or later. Some PBXs may require a T1 card to be installed in the EXTender PBXgateway II to support MCK EXTender 3000 remote modules.

[2]Supported for DEFINITY by the EXTender PBXgateway II running software release 2.1 and equipped with an analog client card. The analog client card is not field upgradeable.

[3]Software release 3.1 is required for direct termination of frame relay networks.

Visit www.mck.com for more information on this product.

Product specifications subject to change without notice.

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*MCK's IP-based products utilize Voice over IP (VoIP) technology to deliver remote voice solutions. The voice quality of these solutions is dependent on variables such as available bandwidth, network latency and quality of service (QoS) initiatives, all of which are controlled by the network and Internet service providers. Because these variables are not in MCK's control, it cannot guarantee the performance of the user's IP-based remote voice solution.

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